# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/690,259 | 10/21/2003 | Charles L. Compton | CCCI 0110 PUS | 3418 |

| 22045 | 7590 | 08/24/2005 |
|---|---|---|

BROOKS KUSHMAN P.C.
1000 TOWN CENTER
TWENTY-SECOND FLOOR
SOUTHFIELD, MI 48075

| EXAMINER |
|---|
| YANG, LINA |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2665 | |

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/690,259 | COMPTON ET AL. |
| | Examiner | Art Unit | |
| | Lina Yang | 2665 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 July 2005*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to..

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1.      Claims 21, 24-27, 49 and 55 are rejected under 35 U.S. C. 112, second paragraph, as being lacking antecedent basis.3

Claim 21 recites: "...packet rate and ...data rate..." in line 10 page 19 for "packet rate" and line 11 page 20 for "data rate". It's not clear what is the difference between "packet rate" and "data rate". There are no clear definitions for either "packet rate" or "data rate".

Claim 49 is rejected with the same reasons set in forth for claim 21.


Claim 24 recites: "the amount of the flow in terms of data" in line 2 page 20. It's not clear what "the amount of the flow in terms of data" refers to. There is no clear definition for "the amount of the flow in terms of data".

Claims 25, 52-53 are rejected for the same reasons set in forth for claim 24.


Claim 26 recites: "the amount of the flow in terms of packet" in line2 page 20. It's not clear what "the amount of the flow in terms of packet" refers to. There are no definitions for "the amount of the flow in terms of packet".

Claims 27, 54-55 are rejected for the same reasons set in forth for claim 26.

## *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.      Claims 1-3, 9-10, 13, 29-31, 37-38 and 41 are rejected under 35 U.S.C. 102(b)

as being anticipated by Tang et al. (U. S. Patent No. 6,373,824 B1).

Regarding claims 1 and 29, Tang teaches a method of traffic regulation in a

packet communication network, the network including a traffic regulator for regulating

traffic at the packet level, the traffic regulator including a bucket mechanism, the bucket

mechanism including a token bucket associated with a subscriber, the token bucket

being configured to receive new tokens at a fill rate and configured with a bucket depth,

the method comprising: handling packets that arrive at the regulator in accordance with

the token bucket configuration (fig. 1; col. 1 lines 58-67; and col.2 lines 1-25);

measuring a demand placed on the packet communication network by the subscriber

(col.2 lines 35-41); and dynamically adjusting the token bucket configuration for the

subscriber based on the demand (col.2 lines 35-41 and col. 3 lines 1-15).

Regarding claims 2 and 30, Tang further teaches handling packets further comprises: handling packets that arrive at the regulator based on a current number of tokens present in the token bucket (col. 2 lines 6-25).

Regarding claims 3 and 31, Tang further teaches handling packets further comprises: handling a particular packet that arrives at the regulator in a normal fashion when the current number of tokens present in the token bucket is sufficient, otherwise, handling the particular packet that arrives at the regulator in a special fashion (col. 2 lines 6-25).

Regarding claims 9 and 37(differ only by statutory class), Tang further teaches measuring the demand further comprises: monitoring the number of tokens present in the token bucket (col.2, lines 26-34).

Regarding claims 10 and 38, Tang further teaches measuring the demand further comprises: determining a burst demand based on observations made while monitoring the number of tokens present in the token bucket over a period of time (col.2, lines 26-34).

Regarding claims 13 and 41, Tang further teaches dynamically adjusting further comprises: modifying the bucket depth (col.2 lines 35-41 and col. 3 lines 1-15).

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.      Claims 4 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tang et al. (U. S. Patent No. 6,373,824 B1).


Regarding claims 4 and 32, Tang differs from the claimed invention in that Tang

does not specifically teaches that the special fashion of packet handling is to drop the

packet. However, examiner takes an official notice that it is well known in the art to

drop the packet (when the current number of tokens present in the token bucket is not

sufficient), when congestion occurs, or there is no queue, or the queue is fully

occupied. Therefore, it would have been obvious for one of ordinary skill in the art at

the time when the invention was made to clearly incorporate the special fashion of

packet handling is to drop the packet in order to facilitate different traffic situations and

control the traffic.


3.      Claims 5-8, 14-20, 33-36 and 42-48 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Tang et al. (U. S. Patent No. 6,373,824 B1) in view of Wang et

al. (U. S. Patent No. 6,748,435 B1).

Regarding claims 5 and 33, Tang differs from the claimed invention in that Tang

does not specifically teaches that the special fashion of packet handling is to assign a

classification to the packet. However, Wang teaches assigning classification (remark

color) to the packet (Fig. 5 and 6; col. 5 lines 19-33). Therefore, it would have been

obvious for one of ordinary skill in the art at the time when the invention was made to

include that the special fashion of packet handling is to assign a classification to the

packet as taught by Wang et al. in the assembly of Tang in order to improve the

performance of assured traffic.


Regarding claims 6 and 34, Tang differs from the claimed invention in that Tang

does not specifically teaches that handling packets further comprises: handling a

particular packet that arrives at the regulator based on the current number of tokens

present in the token bucket by assigning a classification to the particular packet based

on the current number of tokens present. However, Wang teaches handling a particular

packet that arrives at the regulator based on the current number of tokens present in

the token bucket by assigning a classification to the particular packet based on the

current number of tokens present (fig. 6; col. 5 lines 48-59). Therefore, it would have

been obvious for one of ordinary skill in the art at the time when the invention was

made to include handling a particular packet that arrives at the regulator based on the

current number of tokens present in the token bucket by assigning a classification to

the particular packet based on the current number of tokens present as taught by

Wang et al. in the assembly of Tang in order to improve the performance of assured traffic.

Regarding claims 7 and 35, Tang differs from the claimed invention in that Tang does not specifically teaches that the assigning of the classification takes place in accordance with a predetermined relationship between number of tokens present in the token bucket and appropriate classification. However, Wang teaches the assigning of the classification takes place in accordance with a predetermined relationship between number of tokens present in the token bucket and appropriate classification (fig. 6; col. 5 lines 48-59 and 60-67; col. 6 lines 1-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the assigning of the classification takes place in accordance with a predetermined relationship between number of tokens present in the token bucket and appropriate classification as taught by Wang et al. in the assembly of Tang in order to improve the performance of assured traffic.

Regarding claims 8 and 36, Tang differs from the claimed invention in that Tang does not specifically teaches the assigning of the classification takes place in accordance with a probability mass function that determines the probability mass for each classification based on number of tokens present in the token bucket. However, Wang teaches the assigning of the classification takes place in accordance with a probability mass function that determines the probability mass for each classification

based on number of tokens present in the token bucket ("demotion probability", col. 6 lines 1-22; "promotion probability", col.6 23-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the assigning of the classification takes place in accordance with a probability mass function that determines the probability mass for each classification based on number of tokens present in the token bucket as taught by Wang et al. in the assembly of Tang in order to improve the performance of assured traffic.

Regarding claims 14 and 42(differ only by statutory class Tang differs from the claimed invention in that Tang does not specifically teaches handling packets further comprises: handling a particular packet that arrives at the regulator based on a current number of tokens present in the token bucket by assigning a classification to the particular packet according to a policy based on the current number of tokens present; and wherein dynamically adjusting further comprises: modifying the policy to which the assigning of the classification conforms. However, Wang teaches handling a particular packet that arrives at the regulator based on a current number of tokens present in the token bucket by assigning a classification to the particular packet according to a policy based on the current number of tokens present (fig. 6; col. 5 lines 48-59); and wherein dynamically adjusting further comprises: modifying the policy to which the assigning of the classification conforms (col. 5 lines 60-67; col. 6 lines 1-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include handling packets further comprises: handling a particular packet that

arrives at the regulator based on a current number of tokens present in the token

bucket by assigning a classification to the particular packet according to a policy based

on the current number of tokens present; and wherein dynamically adjusting further

comprises: modifying the policy to which the assigning of the classification conforms as

taught by Wang et al. in the assembly of Tang in order to improve the performance of

assured traffic.


Regarding claims 15 and 43, Tang differs from the claimed invention in that Tang

does not specifically teaches the policy to which the assigning of the classification

conforms is based on a predetermined relationship between number of tokens present

in the token bucket and appropriate classification. However, Wang teaches assigning

of the classification conforms is based on a predetermined relationship between

number of tokens present in the token bucket and appropriate classification (fig. 6; col.

5 lines 48-59 and 60-67; col. 6 lines 1-44). Therefore, it would have been obvious for

one of ordinary skill in the art at the time when the invention was made to include

assigning of the classification conforms is based on a predetermined relationship

between number of tokens present in the token bucket and appropriate classification

as taught by Wang et al. in the assembly of Tang in order to improve the performance

of assured traffic.

Regarding claims 16 and 44, Tang differs from the claimed invention in that Tang does not specifically teaches the policy to which the assigning of the classification conforms is based on a probability mass function that determines the probability mass for each classification based on number of tokens present in the token bucket. However, Wang teaches assigning of the classification conforms is based on a probability mass function that determines the probability mass for each classification based on number of tokens present in the token bucket ("demotion probability", col. 6 lines 1-22; "promotion probability", col.6 23-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include the assigning of the conforms is based on a probability mass function that determines the probability mass for each classification based on number of tokens present in the token bucket as taught by Wang et al. in the assembly of Tang in order to improve the performance of assured traffic.

Regarding claims 17 and 45, Tang teaches a method of traffic regulation in a packet communication network, the network including a traffic regulator for regulating traffic at the packet level, the traffic regulator including a bucket mechanism, the bucket mechanism including a token bucket associated with a subscriber, the token bucket being configured to receive new tokens at a fill rate and configured with a bucket depth, the method comprising: measuring a demand placed on the packet communication network by the subscriber by monitoring the number of tokens present in the token bucket (col. 2 lines 6-25).; and dynamically adjusting the token bucket configuration for

the subscriber based on the demand(col.2 lines 35-41 and col. 3 lines 1-15). Tang differs from the claimed invention in that Tang does not specifically teaches handling a particular packet that arrives at the regulator based on a current number of tokens present in the token bucket by assigning a classification to the particular packet according to a policy based on the current number of tokens present. However, Wang teaches handling a particular packet that arrives at the regulator based on a current number of tokens present in the token bucket by assigning a classification to the particular packet according to a policy based on the current number of tokens present (fig. 6; col. 5 lines 48-59). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include handling a particular packet that arrives at the regulator based on a current number of tokens present in the token bucket by assigning a classification to the particular packet according to a policy based on the current number of tokens present as taught by Wang et al. in the assembly of Tang in order to improve the performance of assured traffic.

Regarding claims 18 and 46, Tang further teaches measuring the demand further comprises: determining a burst demand based on observations made while monitoring the number of tokens present in the token bucket over a period of time (col.2, lines 26-34).

Regarding claims 19 and 47, Tang further teaches dynamically adjusting further comprises: modifying the bucket depth (col.2 lines 35-41 and col. 3 lines 1-15).

Regarding claims 20 and 48, Tang differs from the claimed invention in that Tang

does not specifically teaches dynamically adjusting further comprises: modifying the

policy to which the assigning of the classification conforms. However, Wang teaches

that modifying the policy to which the assigning of the classification conforms (col. 5

lines 60-67; col. 6 lines 1-44). Therefore, it would have been obvious for one of

ordinary skill in the art at the time when the invention was made to include modifying

the policy to which the assigning of the classification conforms as taught by Wang et al.

in the assembly of Tang in order to improve the performance of assured traffic.


4.      Claims 11-12, 21-22, 39-40 and 49-50 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Tang et al. (U. S. Patent No. 6,373,824 B1) in view of Liu et al.

(U. S. Patent Application No. 20040081095 A1).


Regarding claims 11 and 39, Tang differs from the claimed invention in that Tang

does not specifically teaches the bucket mechanism includes a second bucket

arrangement associated with the subscriber, and wherein measuring the demand

further comprises: monitoring the second bucket arrangement. However, it is well

known in the art to use two or more buckets stacked together for finer control. For

example, Liu teaches the bucket mechanism includes a second bucket arrangement

associated with the subscriber, and wherein measuring the demand further comprises:

monitoring the second bucket arrangement ([0036]; [0048] and [0051]). Therefore, it

would have been obvious for one of ordinary skill in the art at the time when the

invention was made to include the bucket mechanism includes a second bucket arrangement associated with the subscriber, and wherein measuring the demand further comprises: monitoring the second bucket arrangement in order to provide finer traffic control.

Regarding claims 12 and 40, Tang differs from the claimed invention in that Tang does not specifically teaches measuring the demand further comprises: measuring the demand placed on the packet communication network by the subscriber for traffic in a different direction than the direction in which traffic is regulated by the subscriber's token bucket. However, Liu teaches measuring the demand placed on the packet communication network by the subscriber for traffic in a different direction than the direction in which traffic is regulated by the subscriber's token bucket ([0043]). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include measuring the demand further comprises: measuring the demand placed on the packet communication network by the subscriber for traffic in a different direction than the direction in which traffic is regulated by the subscriber's token bucket in order to regulate the transmission opportunity allocated to each subscriber.

Regarding claims 21 and 49, Tang teaches a method of traffic regulation in a packet communication network, the network including a traffic regulator for regulating traffic at the packet level, the traffic regulator including a bucket mechanism, the bucket

mechanism including a token buckets associated with a subscriber, the token bucket being configured to receive new tokens at a fill rate and configured with a bucket depth, the method comprising: handling packets that arrive at the regulator in accordance with the token bucket configurations wherein the token bucket uses tokens to regulate the packet flow in terms of packet rate (fig. 1; col. 1 lines 58-67; and col.2 lines 1-25). Tang differs from the claimed invention in that Tang does not specifically teaches the bucket mechanism includes a second token bucket associated with the subscriber, the second token bucket being configured to receive new tokens at a second fill rate and having a second bucket depth, the method comprising: handling packets that arrive at the regulator in accordance with the first and second token bucket configurations, wherein the first token bucket uses tokens to regulate the packet flow in terms of packet rate and wherein the second token bucket uses tokens to regulate the packet flow in terms of data rate such that a particular packet is subjected to handling in accordance with both the first token bucket and the second token bucket. However, it is well known in the art to use two or more buckets stacked together for finer control. For example, Liu teaches the bucket mechanism includes a second bucket arrangement associated with the subscriber, and handling packets that arrive at the regulator in accordance with the first and second token bucket configurations, wherein the first token bucket uses tokens to regulate the packet flow in terms of packet rate (average rate or committed rate) and wherein the second token bucket uses tokens to regulate the packet flow in terms of data rate (peak rate or burst size) such that a particular packet is subjected to handling in accordance with both the first token bucket and the

second token bucket ([0036]; [0048] and [0051]). Therefore, it would have been

obvious for one of ordinary skill in the art at the time when the invention was made to

include the bucket mechanism includes a second bucket arrangement associated with

the subscriber, and handling packets that arrive at the regulator in accordance with the

first and second token bucket configurations, wherein the first token bucket uses

tokens to regulate the packet flow in terms of packet rate and wherein the second

token bucket uses tokens to regulate the packet flow in terms of data rate such that a

particular packet is subjected to handling in accordance with both the first token bucket

and the second token bucket in order to provide finer traffic control.


Regarding claims 22 and 50, Tang further teaches that: measuring a demand

placed on the packet communication network by the subscriber (col.2 lines 35-41); and

dynamically adjusting the token bucket configurations for the subscriber based on the

demand (col. 2 lines 6-25).


5.      Claims 23-28 and 51-56 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tang et al. (U. S. Patent No. 6,373,824 B1) in view of Berger et al.

(U. S. Patent No. 5,274,644).

Regarding claims 23 and 51, Tang teaches a method of traffic regulation in a

packet communication network, the network including a traffic regulator for regulating

traffic at the packet level, the traffic regulator including a bucket mechanism, the bucket

mechanism including a token bucket associated with a subscriber, the token bucket

being configured to receive new tokens at a fill rate and configured with a bucket depth,
the method comprising: handling packets that arrive at the regulator in accordance with
the token bucket configuration (fig. 1; col. 1 lines 58-67; and col. 2 lines 1-25), wherein
the token bucket uses tokens to regulate the packet flow by removing tokens from the
token bucket when handling packets (col. 2 lines 6-12, 26-30). Tang differs from the
claimed invention in that Tang does not specifically teaches that the amount of tokens
to be removed being based on the amount of the flow and being further based on a
classification of the flow. However, Berger teaches that the amount of tokens to be
removed being based on the amount of the flow and being further based on a
classification of the flow (col. 3 30-48 ad 62-68; col.4 lines 1-9). Therefore, it would
have been obvious for one of ordinary skill in the art at the time when the invention was
made to include the amount of tokens to be removed being based on the amount of the
flow and being further based on a classification of the flow as taught by Berger et al. in
the assembly of Tang in order to obtain additional control and improve the performance
of assured traffic.

Regarding claims 24 and 52, Tang differs from the claimed invention in that Tang
does not specifically teaches that the amount of tokens to be removed is based on the
amount of the flow in terms of data and is further based on the classification of the flow.
However, Berger teaches that the amount of tokens to be removed is based on the
amount of the flow in terms of data and is further based on the classification of the flow
(col. 3 30-48 ad 62-68; col.4 lines 1-9). Therefore, it would have been obvious for one

of ordinary skill in the art at the time when the invention was made to include the

amount of tokens to be removed is based on the amount of the flow in terms of data

and is further based on the classification of the flow as taught by Berger et al. in the

assembly of Tang in order to obtain additional control and improve the performance of

assured traffic.

Regarding claims 25 and 53, Tang differs from the claimed invention in that Tang

does not specifically teaches that the amount of tokens to be removed is based on the

amount of the flow in terms of data and a multiplier that is a function of the

classification of the flow. However, Berger teaches that the amount of tokens to be

removed is based on the amount of the flow in terms of data and a multiplier (weighting

factor) that is a function of the classification of the flow (col. 3 30-48 ad 62-68; col.4

lines 1-23); Therefore, it would have been obvious for one of ordinary skill in the art at

the time when the invention was made to include the amount of tokens to be removed

is based on the amount of the flow in terms of data and a multiplier that is a function of

the classification of the flow as taught by Berger et al. in the assembly of Tang in order

to obtain additional control and improve the performance of assured traffic.

Regarding claims 26 and 54, Tang differs from the claimed invention in that Tang

does not specifically teaches that the amount of tokens to be removed is based on the

amount of the flow in terms of packets and is further based on the classification of the

flow. However, Berger teaches that the amount of tokens to be removed is based on

the amount of the flow in terms of packets and is further based on the classification of

the flow (col. 3 30-48 ad 62-68; col.4 lines 1-9). Therefore, it would have been obvious

for one of ordinary skill in the art at the time when the invention was made to include

the amount of tokens to be removed is based on the amount of the flow in terms of

packets and is further based on the classification of the flow as taught by Berger et al.

in the assembly of Tang in order to obtain additional control and improve the

performance of assured traffic.

Regarding claims 27 and 55, Tang differs from the claimed invention in that Tang

does not specifically teaches that the amount of tokens to be removed is based on the

amount of the flow in terms of packets and a multiplier that is a function of the

classification of the flow. However, Berger teaches that the amount of tokens to be

removed is based on the amount of the flow in terms of packets and a multiplier

(weighting factor) that is a function of the classification of the flow (col. 3 30-48 ad 62-

68; col.4 lines 1-23). Therefore, it would have been obvious for one of ordinary skill in

the art at the time when the invention was made to include the amount of tokens to be

removed is based on the amount of the flow in terms of packets and a multiplier that is

a function of the classification of the flow as taught by Berger et al. in the assembly of

Tang in order to obtain additional control and improve the performance of assured

traffic.

Regarding claims 28 and 56, Tang further teaches that: measuring a demand placed on the packet communication network by the subscriber (col.2 lines 35-41); and dynamically adjusting the token bucket configurations for the subscriber based on the demand (col. 2 lines 6-25).

### *Response to Arguments*

Applicant's arguments filed 7/22/2005 have been fully considered but they are not persuasive.

The following are the responses to the applicant's arguments on page 2.

(1) Tang fails to suggest dynamic adjustment of the token bucket configuration for the subscriber based on the demand regarding independent claims 1, 17, 29 and 45 (page 4).

-In reply, Tang discloses the adjustment of the token bucket configuration for the subscriber based on the demand "in real time" (col. 3 lines 1-15).

(2) The modified assembly of Tang and Liu fails to disclose or suggest the first and second token buckets that handle flow in different ways regarding independent claims 21 and 49 (Page 5).

-In reply, applicants argue that the claims recite a specific arrangement of first and second token buckets that handle flow in different ways, one in terms of packet rate and one in terms of data rate. However, as applicants admitted, packets contain data (bits or bytes). Each packet has a defined number of bits or bytes of data. Then, the

packet rate, which is the number of packets transmitted per time unit, can be converted

into bits or bytes of data transmitted per time unit, that is the data rate. Therefore, the

modified assembly of Tang and Liu discloses the limitations claimed in claims 21 and

49.


(3) The modified assembly of Tang and Berger fails to disclose or suggest "the

amount of tokens to be removed being based on the amount of the flow and being

further based on a classification of the flow," in combination with other limitations (page

6).

-In reply, the modified assembly of Tang and Berger clearly discloses that the

amount of tokens to be removed being based on the amount of the flow (col. 3 lines 62-

65 in Berger) and being further based on a classification of the flow (col. 4 lines 3-8 in

Berger). Although, the modified assembly of Tang and Berger uses a token bank per

class, it would have been obvious to one of ordinary skill in the art at the time of

invention was made to combine the banks together to form a single and bigger bucket

to regulate the traffic. Furthermore, it has been held that there would be no invention in

shifting the location parts, In re Japikse, 86 USPQ 70 (CCPA 1950). In this case,

combining the banks together would not change the traffic regulation function.


### Conclusion

6.     **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

7.      Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571)272-3151. The examiner can normally be reached on 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 517-273-8300..

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LY

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600